Remarks

Claims 1-30 are pending in this application. In an Office Action dated May 3, 2005, the Examiner rejected these claims under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,025,785 to Farris *et al.* Applicant respectfully disagrees with the Examiner's rejections and requests reconsideration in light of the following remarks.

Claim 1 provides a system for wirelessly activating an appliance which responds to one of a plurality of transmission schemes. The system includes a transmitter, at least one user activation input, a user programming input, memory, and control logic. The transmitter transmits a radio frequency activation signal based on any of the plurality of transmission schemes. Each activation input identifies a wireless channel. The memory holds data describing a plurality of rolling code transmission schemes and a plurality of fixed code transmission schemes. The control logic implements a rolling code programming mode, a fixed code programming mode and an operating mode. In rolling code programming mode, the control logic generates and transmits ***a sequence of rolling code activation signals, each based on a different rolling code transmission scheme***, until user input indicates a successful rolling code transmission scheme. The control logic then stores data specifying the successful rolling code transmission scheme associated with one of the activation inputs. In fixed code programming mode, the control logic receives a fixed code from the user programming input and then generates and transmits ***a sequence of fixed code activation signals, each based on one of the plurality of fixed code transmission schemes*** and each transmitting the received fixed code, until user input indicates a successful fixed code transmission scheme. The control logic stores the fixed code and data specifying the successful fixed code transmission scheme associated with one of the activation inputs. In operating mode, the control logic receives an activation input, retrieves data associated with the received activation input, and transmits an activation signal based on the retrieved data.

The Examiner asserts that claim 1 is taught by Farris. Farris discloses an appliance which can be activated by different types of access codes.

> A barrier movement actuating receiver learns and responds to fixed code type access codes and rolling code type access code wherein ***the actuating receiver includes a***

> ***programmer for programming the actuating receiver to accept fixed or rolling type access codes*** and includes a learning mode for enabling the programmer to add valid access codes to a memory. The ***receiver*** further includes a controller for identifying the type of access code received and a revised access code routine for learning both fixed codes and rolling codes. The controller can be set to execute the access code routine corresponding to the type of access code identified. After the first code is learned, all subsequent codes learned must be of the same type until the programmer is re-enabled.
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> Farris, Abstract.

Farris neither teaches nor fairly suggests Applicant's invention of transmitting a sequence of rolling code activation signals each based on a different rolling code transmission scheme or of transmitting a sequence of fixed code activation signals, each based on a different fixed code transmission scheme.

The Examiner's only support that Farris discloses transmitting a sequence of different rolling code activation signals is "C4, L19-67, C5, L15-39, C6, L5-48, teach rolling code in program mode and transmitting." This may or may not be a correct representation of Farris. Whether it is or not, the Examiner doesn't identify any teaching for transmitting a sequence of rolling code activations signals using different code schemes. Similarly the Examiner's only support that Farris discloses transmitting a sequence of different fixed code activation signals is "C6, L49-61, C7, L5-14, C8, L26-40 teach fixed code programming mode and transmitting." Once again, this may or may not be accurate, but it doesn't identify any teaching for transmitting a sequence of fixed code activation signals using different schemes.

Claim 1 is patentable over Farris. Claims 2-14, which depend from claim 1, are therefore also patentable.

Independent claim 15 provides a method of activating an appliance which is controlled by a radio frequency activation signal. If a user indicates that the appliance is activated by a rolling code activation signal, ***a sequence of different rolling code activation signals is transmitted*** until the user indicates a successful rolling code transmission. Data is then stored representing a rolling code scheme used to generate the successful rolling code transmission. If the user indicates that the appliance is activated by a fixed code activation signal, ***a fixed code word is used to generate and transmit each of a sequence of different***

fixed code activation signals until the user indicates a successful fixed code transmission. Data is then stored representing the fixed code word and a fixed code scheme used to generate the successful fixed code transmission. In response to an activation input, an activation signal is generated and transmitted based on stored data.

The Examiner rejected claim 15, as in claim 1, without identifying any teaching in Farris for transmitting a sequence of different rolling code activation signals. Once again, the Examiner merely states that Farris "teach[es] rolling code in program mode an transmitting." Similarly, the Examiner fails to identify any teaching in Farris for transmitting each of a sequence of different fixed code activation signals. Once again, the Examiner merely states that Farris "teach[es] fixed code programming mode and transmitting."

Claim 15 is patentable over Farris. Claims 16-23 depend from claim 15 and are therefore also patentable.

Claim 24, as amended, provides a method of programming a remote control programmable to one of a plurality of appliance activation schemes. A user type input specifying activation signal type is received. If the user type input specifies variable code type, variable code activation signals are transmitted using different appliance activation schemes until user success input indicating a target appliance has been activated is received. If the user type input specifies fixed code type, user fixed code input is received providing a fixed code. Fixed code activation signals are transmitted using different appliance activation schemes until receiving user success input indicating the target appliance has been activated. Information specifying an activation signal for activating the target appliance is stored based on the received user success input.

The Examiner rejected claim 24 based on Farris. In support, the Examiner stated that Farris discloses "receiver where transmitting variable code activation signals until receiving." Whatever this means, it does not disclose transmitting variable code activation signals using different appliance activation schemes. Farris neither teaches nor fairly suggests transmitting variable code activation signals using different schemes.

Claim 24 is patentable over Farris. Claim 25, which depends from claim 24, is therefore also patentable.

Independent claim 26 provides method of programming a programmable remote control to a fixed code appliance activation scheme. A fixed code associated with a fixed code appliance is received. At least a first and a second activation signal are transmitted. Each of these signals is based on the same fixed code activation scheme and on the received fixed code. However, the second activation signal is based on a binary modification of the received fixed code.

The Examiner rejected claim 26 based on Farris. The Examiner's only support for Farris teaching the claim elements was "C5 L15-39, C6, L49-61." These passages are as follows (emphasis added):

> Referring now to FIGS. 9A through 9B, the flow chart set forth therein describes the operation of the transmitter 30. A ***rolling code*** from nonvolatile memory is incremented by three in a step 500, followed by the ***rolling code*** being stored for the next transmission from the transmitter when a transmitter button is pushed. The order of the binary digits in the ***rolling code*** is inverted or mirrored in a step 504, following which in a step 506, the most significant digit is converted to zero effectively truncating the binary rolling code. The ***rolling code*** is then changed to a trinary code having values 0, 1 and 2 and the initial trinary rolling code is set to 0. It may be appreciated that it is trinary code which is actually used to modify the radio frequency oscillator signal and the trinary code is best seen in FIG. 8. It may be noted that the bit timing in FIG. 8 for a 0 is 1.5 milliseconds down time and 0.5 millisecond up time, for a 1, 1 millisecond down and 1 millisecond up and for a 2, 0.5 millisecond down and 1.5 milliseconds up. The up time is actually the active time when carrier is being generated. The down time is inactive when the carrier is cut off. The codes are assembled in two frames, each of 20 trinary bits, with the first frame being identified by a 0.5 millisecond sync bit and the second frame being identified by a 1.5 millisecond sync bit.
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> FIG. 12 is a circuit description of a fixed code transmitter 31 which includes a controller 155, a pair of switches 113 and 115, a battery 114 and an RF transmitter stage 161 of the type discussed above. Controller 155 is a relatively simple device and may be a combination logic circuit. Controller 155 permanently stores 19 bits (trinary) of the 20 bit fixed code (FIG. 13) to be transmitted. When a switch, e.g., 113, is pressed, current from the battery 114 is applied via the switch 113 and a diode 117 to a 7.1 volt source 116 which powers RF

> transmitter stage 161. The 7.1 volt source is also connected to ground via a LED 120 and Zener diode 121 which produces a regulated 5.1 volt source 118. The 5.1 volt source is connected to power the controller 155.

The first paragraph deals with rolling codes and, more particularly, forming a variable trinary code word. The second paragraph describes a transmitter for transmitting a fixed code and makes no mention of transmitting two activation signals, the first based on a fixed code and the second based on a binary modification of the fixed code.

Claim 26 is patentable over Farris. Claims 27 and 28, which depend from claim 26, are therefore also patentable.

Independent claim 29 provides a system for wirelessly activating an appliance which responds to one of a plurality of transmission schemes. The system includes a radio frequency transmitter, memory holding data describing the transmission schemes, and control logic operative to store a fixed code. If a fixed code is stored, ***a sequence of fixed code activation signals is transmitted based on the fixed code and data held in the memory*** until input indicating activation of the appliance is received. If no fixed code is stored,***a sequence of rolling code activation schemes based on data held in memory is transmitted*** until input indicating activation of the appliance is received. An indication as to which activation scheme activated the appliance is stored based on the received input indicating activation of the appliance. An activation signal is generated based on the stored indication and a received activation input.

The Examiner rejected claim 29 based on Farris. The Examiner's entire basis for rejecting enumerated items (b)-(e) in claim 29 is "C6, L49-61, C7, L6-14, C9, L31-61." These passages are reproduced below (emphasis added):

> FIG. 12 is a circuit description of a fixed code transmitter 31 which includes a controller 155, a pair of switches 113 and 115, a battery 114 and an RF transmitter stage 161 of the type discussed above. Controller 155 is a relatively simple device and may be a combination logic circuit. Controller 155 permanently stores 19 bits (trinary) of ***the 20 bit fixed code*** (FIG. 13) to be transmitted. When a switch, e.g., 113, is pressed, current from the battery 114 is applied via the switch 113 and a diode 117 to a 7.1 volt source 116 which powers RF transmitter stage 161. The 7.1 volt source is also connected to

ground via a LED 120 and Zener diode 121 which produces a regulated 5.1 volt source 118. The 5.1 volt source is connected to power the controller 155.

FIG. 13 represents ***the code*** transmitted from a fixed code transmitter such as transmitter 30. ***The code*** comprises 20 bits in two 10 bit words with a blank period between the words. Each word is preceded by a sync bit which allows receiver synchronization and which identifies the type of code being sent. The sync bit for the first code word is active for approximately 1.0 milliseconds and the sync bit of the second word is active for approximate 3 milliseconds.

The radio decode and logic microcontroller 84 (FIG. 2) of the present embodiment can respond to both rolling codes as shown in FIG. 8 and fixed codes as shown in FIG. 13; however, after it has learned one type of code all permissible codes will be of the same type until the system memory is erased and the other type of code is entered and exclusively responded to. When the apparatus is first powered up or after memory control values have been erased in response to a greater than 6 second press of program button 151, the system does not know whether it will be trained to respond to fixed or rolling codes. Accordingly, the system enters a test mode to enable it to receive both types of access codes and ***determine which type of code is being received***. In the test mode the apparatus periodically resets itself to receive one of rolling codes or alternatively, fixed codes, until a code of the expected type is received. A short press of switch 151 after the 6+ second press causes a learn mode to be entered. ***When a code is correctly received in the test mode, and the apparatus is in a learn mode, the type of expected code becomes the code type to be received and the received fixed code or fixed code portion of a received rolling code is stored in nonvolatile memory for use in matching later received codes***. In the case of a received rolling code, the rolling code portion is also stored in association with the stored fixed code portion to be used in matching subsequently received rolling codes. After a rolling code has been learned by the system, only additional rolling codes can be learned until a reprogramming occurs. Similarly, after a fixed code is learned, only additional fixed codes can be received and learned until reprogramming occurs.

The first paragraph discloses a single, 20-bit code. The second paragraph discloses how a single, 20-bit code is transmitted as two 10-bit words. The third paragraph discloses a receiver

which detects whether a rolling code or fixed code word was transmitted. In none of these sections does Farris teach or fairly suggest a sequence of either fixed or rolling code signals.

Claim 29 is patentable over Farris. Claim 30, which depends from claim 29, is therefore also patentable.

Claims 1-30 are pending in this application. Applicant believes these claims meet all substantive requirements for patentability an respectfully request that this case be passed to issuance. A check is enclosed to cover the Petition fee of $450. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

The Examiner is invited to contact the undersigned to discuss any aspect of this case.

Respectfully submitted,

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By _____
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